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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,196	09/09/2003	Kenji Sera	Q77403	1621
23373	7590	03/22/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			PHAM, THANHHA S	
			ART UNIT	PAPER NUMBER
			2813	

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/657,196

Applicant(s)

SERA ET AL.

Examiner

Thanhha Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 1-20, 38, 39, 41, 44, 45, 47 and 49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 21 and 35 is/are allowed.
- 6) ☒ Claim(s) 22-34, 36-37, 40, 42, 43, 46, 48 and 50-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action is in response to Applicant's Amendment dated 01/06/2006.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. **Claims 22-34, 37, 40, 42-43, 46, 48, 50-62 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

► With respect to claim 22,

line 2, it is not clear that "a transistor" as cited in line 2 of claim 22 is to refer back to the "at least one transistor" as cited in line 13 of claim 21 OR "a transistor" as cited in line 2 of claim 22 is an additional different transistor to the "at least one transistor" as cited in line 13 of claim 21.

line 3, it is not clear that "a second power supply" as cited in claim 22 is the same or different to "a second power supply" as cited in claim 21.

lines 4-5, it is not clear that "a threshold value higher than that of the transistors having relatively low threshold value" as cited in claim 22 is the same or different to "a threshold value higher than that transistors having relatively low threshold value" as cited in claim 21.

line 6, it is not clear "said switch circuit comprises by said current source" means.

lines 7-8, it is not clear that "a transistor having a threshold value higher than that of the transistors having relatively low threshold value" as cited in lines 7-8 of claim 22 is the same or different to the "at least one transistor" as cited in claim 21. It is not clear that "a threshold value higher than that of the transistors having relatively low threshold value" as cited in lines 7-8 of claim 22 is the same or different to "a threshold value higher than that of the transistors having relatively low threshold value" as cited claim 21.

line 8, it is not clear that "a control terminal" as cited in line 8 of claim 22 is the same or different to "a control terminal" as cited in line 15 of claim 21.

► With respect to claim 23,

line 2, it is not clear that "a transistor constituted said switch circuit" is to refer back to the "at least one transistor" as cited in line 13 of claim 21 OR this is an additional different transistor to the "at least one transistor" as cited in line 13 of claim 21.

lines 2-3, it is not clear that "a threshold value higher than that of the transistors having relatively low threshold value" as cited in claim 23 is the same or different to "a threshold value higher than that transistors having relatively low threshold value" as cited in claim 21.

► With respect to claim 24,

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line 17, it is not clear that "a second power supply" as cited on line 17 of claim 24 is the same or different to "a second power supply" as cited on lines 7-8 of claim 24.

Lines 17-18, 20-21 and 25-26, it is not clear that "a threshold value higher than that of the transistors having relatively low threshold value" ('s) are actually the same or different threshold value.

► With respect to claim 25,

line 14, term "and/or" should be changed to "and" to clarify scope of claim (since both of said differential pair and said load element pair comprised of transistors)

lines 18-19, 21-22, 26-27, it is not clear that "a threshold value higher than that of the transistors having relatively low threshold value" ('s) are actually the same or different threshold value.

► With respect to claim 26,

line 3-4, it is not clear that "a threshold value higher than that of the transistors having relatively low threshold value" as cited in claim 26 is the same or different to any "a threshold value higher than that transistors having relatively low threshold value" ('s) as cited in claim 24.

► With respect to claim 28,

lines 3-4, it is not clear that "a threshold value higher than that of the transistors having relatively low threshold value" as cited in claim 28 is the same or different to any "threshold value higher than that transistors having relatively low threshold value" ('s) as cited in claim 24.

► With respect to claim 29,

it is not clear that “relatively low threshold values” of each of transistors of “said first differential pair and/or said first load element pair” is the same or different to the “relatively low threshold values” of each of transistors of “said second differential pair and/or said second load element pair”

it is not clear that “a threshold value higher than that of the transistors having relatively low threshold value” of the transistor of the first switch circuit is the same or different to “a threshold value higher than that of the transistors having relatively low threshold value” of the transistor of the second switch circuit.

► With respect to claim 30,

it is not clear that “a relatively low threshold value” of the first output stage transistor is the same or different value to that “a relatively low threshold value” of the second output stage transistor.

It is not clear that “a threshold value higher than that of the transistors having relatively low threshold value” (‘s) of transistors of the third switch circuit and the forth switch circuit are the same values or different values. It is not clear that “a threshold value higher than that of the transistors having relatively low threshold value” (‘s) of transistors of the third switch circuit and the forth switch circuit are the same values or different values to the “a threshold value higher than that of the transistors having relatively low threshold value” (‘s) as cited in claim 29.

► With respect to claim 31,

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It is not clear that "a threshold value higher than that of the transistors having relatively low threshold value" ('s) of transistors of said first output amplification stage and said second output amplification stage are the same values or different values. It is not clear that "a threshold value higher than that of the transistors having relatively low threshold value" ('s) of transistors of said first output amplification stage and said second output amplification stage are the same values or different values to the "a threshold value higher than that of the transistors having relatively low threshold value" ('s) as cited in claim 29.

► With respect to claim 34,

It is not clear that "a threshold value higher than that of the transistors having relatively low threshold value" ('s) of transistors of said first output amplification stage and said second output amplification stage are the same values or different values. It is not clear that "a threshold value higher than that of the transistors having relatively low threshold value" ('s) of transistors of said first output amplification stage and said second output amplification stage are the same values or different values to the "a threshold value higher than that of the transistors having relatively low threshold value" ('s) as cited in claim 29.

► With respect to claim 37,

lines 2-3, 5-6, 8-9, it is not clear that "a threshold value higher than that of the transistors having relatively low threshold value" ('s) are actually the same or different threshold value.

► With respect to claim 40,

scope of the claim cannot be defined

- ▶ With respect to claims 42-43, 48

scope of the claims can not be defined. it is not clear that "said transistors" refers to which transistors of which element of the differential amplifier circuit of claim 21.

- ▶ With respect to claim 50,

the scope of claim can not be defined. It is not clear which two sets of "a plural of transistors" are intended to. It is not clear transistors cited in claim 50 refers back to any transistor of claims 48 and 21 OR these are additional different transistors.

- ▶ With respect to claims 51-52,

it is not clear that "the transistors" refers to which transistors of the claim. It is not clear which "the transistors" are intended to and/or where "the transistors" are located.

- ▶ With respect to claims 53-54,

it is not clear "said transistors" are the transistors of which elements as defined in claim 24.

- ▶ With respect to claims 55-56,

it is not clear "said transistors" are the transistors of which elements as defined in claim 25.

- ▶ With respect to claims 57-58,

it is not clear "said transistors" are the transistors of which elements as defined in claim 29.

- ▶ With respect to claims 59-60,

it is not clear "said transistors" are the transistors of which elements as defined in claim 35.

- ▶ With respect to claims 61-62,

it is not clear "said transistor" are the transistors of which elements as defined in claim 36.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claim 36 is rejected under 35 U.S.C. 102(e) as being anticipated by Minamizaki et al [US 2003/0038655].**

Minamizaki et al (fig 1, text [0001]-0111) discloses the claimed differential amplifier circuit comprising:

a differential pair (M3, M4)

for differentially receiving signal voltage supplied to a input pair thereof;

a load element pair (M5, M7) connected between an output pair of the differential pair and a power supply (Vdd); and

a current source (i2) for supplying a current to said differential pair;

said differential pair and/or said load element pair being comprised of transistors each having relatively low threshold value;

said differential amplifier circuit further comprising a switch circuit for controlling activation and deactivation, wherein switch circuit includes at least one transistor (M7) having a threshold value higher than that of the transistor having relatively low threshold value and including a control terminal for receiving a control signal to be controlled to be on and off.

Allowable Subject Matter

4. Claims 21 and 35 are allowed.

Conclusion

Any inquiry concerning is communication or earlier communications from the examiner should be directed to Thanhha Pham whose telephone number is (571) 272-1696. The examiner can normally be reached on Monday and Thursday 9:00AM - 9:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Thanhha Pham', is written over the printed name. The signature is stylized with loops and a long horizontal stroke extending to the right.

Thanhha Pham
Patent Examiner
Patent Examining Group 2800